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PATENT COOPERATION TREATY

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FA1159PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US04/14371	International filing date *(day/month/year)* 06 May 2004 (06.05.2004)	Priority date *(day/month/year)* 07 May 2003 (07.05.2003)
International Patent Classification (IPC) or national classification and IPC IPC(7): G01J 3/42,3/46 and US Cl.: 356/319,402		
Applicant E.I. DU PONT DE NEMOURS AND COMPANY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of ___ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
03 December 2004 (03.12.2004)	30 August 2005 (30.08.2005)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/ US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Gregory J. Toatley, Jr. Telephone No. (571) 272-2059

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US04/14371

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed.

☒ the description:
pages 1-44 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the claims:
pages 45-50, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☐ the drawings:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages NONE

☐ the claims, Nos. NONE

☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	8,9,15-19,22,24 and 25	YES
	Claims	1-7,10-14,20,21 and 23	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-25	NO
Industrial Applicability (IA)	Claims	1-25	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS
Please See Continuation Sheet

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claim 17 is objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claim 17 is indefinite for the following reason(s): improperly dependent upon claim 8 that points to a method rather than a portable computer usable storage medium such as claim 16.

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

V. 2. Citations and Explanations:

Claims 1-7 and 10-14 lack novelty under PCT Article 33(2) as being anticipated by Falcoff (US 4,403,866).

As for claims 1-7 and 10-14, Falcoff in a color matching method and system discloses the following: measuring reflectances of a target with a spectrophotometer to plot spectral curves and calculating target color values of said target; selecting at least one colorant combination from stored values of standards; determining concentrations of colorants and balancing with non-colorants such as solvents and binder solutions; selecting optimized combination from an equation such as a difference between L*, a*, and b* values; comparing composition when applied to target coating; displaying values on a screen suggested by a computer and color stylist; mixing is involved to produce desired optimized formulation; applying optimized formulation through spraying onto a substrate such as a primed steel panel; substrate is a truck or auto body and coating composition is automotive paint; at least one colorant is used in the formulation; a matched coating composition is produced (column 2, lines 40-67; column 3, lines 5-45; columns 4-5; column 8, lines 20-35); the device comprises a programmable computer thereby having computer code with spectrophotometer; mixer; dispenser (Fig. 1: 1, 19, 13 with FILL).

Claims 20, 21, and 23 lack novelty under PCT Article 33(2) as being anticipated by Cheetam (5,668,633).

As for claims 20, 21, 23, Cheetam in a method and system for formulating a color match discloses: measuring the spectrum, reflectances, of a target standard; calculating target color values of said target; selecting at least one colorant combination; determining concentrations of colorants; balancing combinations to allow for presence of noncolorant such as resins or grades of plastics; selecting optimal combination to be mixed and matched and formed with resin form; mixing of coating and resins to produced matched resin; processing said resin through molding (Figures 2-3; columns 3-6).

Claims 8, 9, 15, and 18 lack an inventive step under PCT Article 33(3) as being obvious over Falcoff (US 4,403,866) in view of Corrigan (US 6,522,977) and Kettler (US 5,929,998) and Steenhoek (US 4,917,495).

As for claims 8, 9, 15, and 18 Falcoff discloses everything as above (see claims 1 and 11). He is silent about using multiple angles with his spectrophotometer nor the transportability of the device. However, Corrigan, Kettler, and Steenhoek all teach that color measurements are made at multiple angles with aspecular angles and that their systems are portable (Corrigan: column 6, lines 24-60; Kettler: column 5, lines 10-35; Steenhoek: Figure 1 and column 5, lines 30-60). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the method and device provide multiple aspecular angles of measurement in order to derive color measurements from reflectance values, for colorimetric values are obtained by a plurality of angles of measurement. In addition, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the system be portable in order to facilitate quick measurements on a variety of test surfaces such as horizontal and vertical surfaces on automobile bodies.

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Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Claims 16-17 lack an inventive step under PCT Article 33(3) as being obvious over Falcoff (US 4,403,866) in view of Corrigan (US 6,522,977).

As for claims 16-17, Falcoff teaches claim 1 (see above) and a programmed computer (column 5, lines 65-67). He is silent concerning portable computer storage medium such as CD-ROM. However, Corrigan in a color matching device teaches the use of several portable storage media such as CD-ROM, DVD ROM magnetic tape (col. 6, lines 55-60). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the system comprise portable computer usable storage medium such as CD-ROM in order to temporarily or permanently record data in order for it to be read later. Claim 17 has been interpreted as depending from claim 16.

Claim 19 lack an inventive step under PCT Article 33(3) as being obvious over Falcoff (US 4,403,866) in view of Milosevic (US 4,853,542).

As for claim 19, Falcoff discloses everything as above (see claim 11). He is silent concerning a spherical spectrophotometer. However, Milosevic teaches in a spectrophotometer having a spherical configuration to increase signal to noise (column 1, lines 65-67; column 2, lines 1-20). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the spectrophotometer be spherical in order to increase the signal to noise ratio of the system.

Claims 22, 24, 25 lack an inventive step under PCT Article 33(3) as being obvious over Cheetam (5,668,633).

As for claims 22, 24, 25 Cheetam discloses everything as above (see claim 20). He is silent concerning the particular type of molding process (column 5, lines 38-40), the particular substrate and particular matched substrate but he discloses that the substrates may be plastic, paper, or cloth (column 2, lines 55-60). Extrusion, thermoforming, injection molding, blow and rotational molding are well known processes of manipulating resins into forms. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the resin processed through extrusion, thermoforming, or type of molding in order to form it into a particular shape such as a plaque or chip.

Claims 1-25 meet the criteria set out in PCT Article 33(4), and thus has industrial applicability because the subject matter claimed can be made or used in industry.

NEW CITATIONS